Decision Support System: Use to increase sales through performance Indicators in Pharmaceutical Industry

(A Special Study in Rajasthan State)

A Synopsis

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Of
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1. INTRODUCTION

The main objective of the research is to understand the importance of Performance Indicators which can boost the Sales of any Pharmaceutical Organization by using Decision Support System as a helping tool.

The enhanced capabilities of the Right Decision support System have streamlined data collection and analysis which in turn help any pharmaceutical organization to take better decisions.

In today's scenario , the dream of any CEO of Pharmaceutical Organization is to double the sales growth in the shortest available time. In early 1990's ,the sales and marketing professionals were facing challenges in understanding the couple of parameters like Current Market share ,Targeting high potential markets for their respective portfolio. The organization's had few established products which were facing threat of coming off patent and simultaneously they had a challenge to face fierce competition with the newer product range. So ,in this case the organization was looking forward to some sort of Technological based approach which may help them to sell their products .The marketing department need to align their campaigns and strategy, training needs to ensure right implementation of the same through field executives and production needs to the make the products available at right time with desired quantity. The problem was not with attaining this data but unfortunately it lay in turning the above mentioned data into correct information so as to better understand the ongoing market pattern,our own strategies and right execution by sales force to hit the required sales no.

So here Decision Support Systems comes to rescue such Pharmaceutical Organization. Although in the market there are lot many DSS solutions available in

the market, but they all should be customized so as to fulfill the specific requirements of the said Pharmaceutical Organization .Moreover, the user interface should be customized to conclude important & desired information's from the data base.The concerned departments needed more than a fishing rod in this huge ocean of database to find their desired type of fish. They actually need a well sophisticated navigational and sonar equipment.

Role of Decision Support systems in pharmaceutical industry-

As we move into 21st century, a lot many technological advancements are occurring which are of a great help in conducting routine business activities. Such type of advancements in the field of hardware and software like CRM ,Business Intelligence, Data mining, web platforms, SAP Concur have made the tasks very user friendly and decision oriented in any pharma industry .

Decision support system is a process which helps in taking decisions rather automating the process of decision making. For a decision maker in context to problem solving DSS helps in choosing the alternative solution and also helps in retrieving the important information.

Decision Support systems / Business Intelligence basically a platform where data gathering, storage and competitive information is presented to the planners and key decision makers.

- **DSS as a Knowledge Bank:**

The first and foremost important task of any pharmaceutical organization is to update the clinicians regarding the latest scientific updates. Here DSS is an huge umbrella under which all the relevant studies, comparative data report, product features, articles are freely available. The pharmaceutical organization utilizes this umbrella (Knowledge Bank) to spread the vital and important information to a large no of key customers in lightening speed .This in turn help a clinician to take important decision in their routine practice.

- **DSS as a Marketing Campaign**:

In order to increase the sales, the organization utilizes this platform(Marketing campaign) to reach the end users through advertisement in TV ,Radio, Print, Secondly other marketing tools like Digital presentation and PIL's(Patient Information Leaflet) of the various types of diseases are freely available online as well as in the market place .Both the above mentioned points directly help an organization to boost up their sale numbers .

- **DSS as a DBMS:**

One of the parameters to run any successful pharmaceutical organization is based on the correct decisions taken by the top level hierarchy. The key indicators like Customer coverage, Right frequency, Health of the sales, stock inventory are analyzed for a particular task or general analysis operations. The end result of these analysis via DSS help the managerial cadre to take right decisions so as to positively impact business results.

- **DSS as HRM:**

One of the important pillar on which an organization stands is their Human Resource .It's very vital for any pharmaceutical organization to have seamless information

about the people employed and what personnel will be needed in near future. Information is needed both at macro & micro level. Solutions for recruitment ,training, benefits, payroll and HR are provided by DSS

Keywords:

Decision support System, Key element , System Application and Product, Customer Relation Management , Knowledge Bank, Database Management System,

2. REVIEW OF LITERATURE:

A literature review basically is a comprehensive set of previous and historical research on a topic. It includes review surveys, scholarly articles, books, magazines, journals and other sources which are relevant to a particular area of research. The review helps in describing, summarizing, and clarifying the previous research.It provides the author a direction to his research and simultaneously give a conceptual base for the research. The literature review acknowledges the work of previous researchers, and by doing so also, provides an assurance to the reader that your work has been well conceived.

The Review of Literature in context to my topic Decision Support Systems (DSS) is as follows:

1. According to the News cast report (Dec 2019) on "Decision support system market covering developing trends ,Major highlights with global analysis & Forecast by 2024" This report describe the enlargement of DSS in last few

years. Decision support system report shows that the various business opportunities have boosted the growth of business in few years.

2. Peter Bou Saba and Stefan Brouwers says in research paper"Using a decision support tool for R&D portfolio management: going beyond initial expectations" in January 2016 EuroMed J of Management 1(3):224 DOI: 10.1504/EMJM.2016.081041.The researcher says that DSS use as a tool for R & Ds strategic decision making at ICI for launching new product ,selecting research project ,allotment of resources and terminating assigned project .It describe judgmental modeling system that have been corporate in modern computer based information system. DSS provides a analytical analysis and daily reporting format that helps to communicate and take a better decision in high level of hierarchy.

3. As per study carried out by Muhammad Imran and AimanTanveer(2015) "DECISION SUPPORT SYSTEMS: CREATING VALUE FOR MARKETING DECISIONS IN THE PHARMACEUTICAL INDUSTRY"In European Journal of Business and Innovation Research Vol.3, No.4, pp.46-65, September 2015 Published by European Centre for Research Training and Development UK (www.eajournals.org) In this study the researcher show the capabilities of decision making by Decision Support System. DSS provides different data collection methods and systematic analysis and gives suitable decision in pharmaceutical industry. With the help of DSS pharma industry just multifold their sales growth.

4. The topic of research is Decision Support Systems in Agriculture: Some Successes and a Bright Future(2015). This paper is published in Efficient

Decision Support Systems - Practice and Challenges From Current to Future book on September 2011 in page number 15.This research describe about the role of decision support system in agriculture knowledge.

5. Rachita Sharma a study on "The decision support system for the pharma industry (2014)" the study describe the role of information system in pharmaceutical industry.The article was published in Medico e-dSS magazine in August2014. Use as a DSS tool they resolved operational issues across diverse geographies in wide market place .Many BI tools are available in the market ,it helps in detailed analysis and data and information provide in on time so they can take decision for future planning .BI tools provides easy and quick access of information in simple practical format ,responds to sms/email alerts and access approval workflow for the managers and sales people in pharma industry.

6. Gautam Datta, NarainGupta(April 2011)in their article on "An Optimization-Based Decision Support System for Strategic Planning in a Process Industry: The Case of an Aluminum Company in India" :This article was published in the reputed journal (operational research society62(4)616-626).In this article the author says that multipoint optimization based DSS can be used in strategic planning. It has used five key elements like: materials, facilities, activities ,storage area and time periods. DSS is directly used as a optimization tool in those elements.

7. Jennifer shang ,Pandu R. Tadikamalla, Lawrence Brow(April 2008) in this research paper on "A decision support system for managing inventory at GlaxoSmithKline" It was published in Decision Support Systems 46 (2008) 1-

13 In this research paper they describe that the Company use supply chain software to streamline and standardized operations. This software imports data from DSS to make a special decision.

The paper describe effective inventory management model for company. The DSS provide differ ent type of information like safety stock level, number of week's forward coverage for each stock keeping unit. This research shows the best implementation of DSS in competitive era , but necessary to careful implementation of DSS.

8. Randy Malec, Roger L. Hayen, A study on "USING DSS FOR MARKETING DECISION-MAKING: THE MDSS" It was published on 2002,and corpus id is 14597670. In this paper the author says that the development of marketing decision support system (MDSS) introduce a new tool or technology based decision support system .It helps to take many marketing decision. The researcher describe the benefits and limitation of MDSS . It provides real data and information to help to take different decision related to marketing strategy. MDSS play a important tool for marketers to make objective and reliable decisions by helping the better solution of complex and semi/unstructured problems. It allows decision makers to provide analytical application models to enhance the quality of marketing decisions.

9. Research Methodology ,Methods and Techniques(Second revised Edition)By C.R. Kothari [New Age International Publisher]. This book is very useful for research scholars..We learn about research, data design , sampling methods , data collection methods , measurement and scaling techniques.

3. OBJECTIVES OF RESEARCH

OBJECTIVES

The research objectives are basically the details of what is to be achieved by the study. The objective should be precise ,descriptive which guides the scholar to carry out the investigations across the variables.

The objective of the research studies are as follows:

- To understand the perspective of each stakeholder with respect to DSS
- To briefly describe the key elements (Knowledge Bank, DBMS, HRM, Marketing Campaign)
- To assess the Contribution of the Key Elements in Decision Making,
- To determine the relation between DSS & Performance of the organization resulting in increase in sales.

4. HYPOTHESIS OF RESEARCH

The hypothesis is a human prediction, but it involves more than a guess. Most of the time, the hypothesis begins with a question which is then explored through background research." As and when I started my research on "Decision Support Systems :Use to increase sales through performance Indicators in pharmaceutical Industry", there were lot many thoughts and predictions came into my mind like:

Ho1 - To assess the Contribution of the Key Elements in Decision Making,

Ho1a- There is no significant impact on knowledge management in decision making

H1a-There is significant impact on knowledge management in decision making

Ho1b- There is no significant impact on Marking Campaign in decision making

H1b -There is significant impact on Marking Campaign in decision making

Ho1c- There is no significant impact on DBMS in decision making

H1c-There is significant impact on DBMS in decision making

Ho1d-There is no significant impact on HRM in decision making

H1d- There is significant impact on HRM in decision making

$H0_{2:}$ There is no significant relationship between DSS & Performance of the organization resulting in increase in sales.

$H_{2:}$ There is significant relationship between DSS & Performance of the organization resulting in increase in sales.

5. FIELD OF RESEARCH:

The pharmaceutical industry is discovers, reveals, produces, and markets drugs or pharmaceutical drugs for use as medications to be administered to different patients, with the aim to cure them, vaccinate them, or identify the symptoms. Pharmaceutical companies may deal in generic or special brand medications and other common medical devices. They are subject to a variety of laws and regulations related to pharma industry that govern the patenting, testing, safety, efficacy producing and marketing of drugs.

Geographically Rajasthan is the biggest state of our country. Historically rich in culture make the state financial sound too .So many pharmaceutical Industries as mentioned above have a strong inclination to market their wide range of products and in turn to increase their sales and profitability in organization.

So, that the State of Rajasthan has been marching ahead towards in terms of industrialization. Due to the consistent support, research and growth strategy adopted by the Government, the units of large, medium and small-scale industries are increasing every year.

We have taken Pharmaceutical Industry in Rajasthan as our Area of Research. There are lot many such organizations operating like

- .GSK
- Pfizer
- Abbott

- Sanofi
- Cipla
- Sun Pharma
- Dabur
- Novartis
- USV
- .DrReddys Lab

6. **RESEARCH DESIGN**

Research design is a huge framework that states the total prototype of conducting research project. It specifies and identify objectives, data collection methods and analysis methods and tools, time, costs, responsibility, possible outcomes, and actions.

The research design provides a exact conceptual framework of how the research study will be carried out. It highlights and focus the techniques which will be followed for collection of data , tabulation and analyzing the data. A research design is a wide plan that states objectives of research project and provides the guidelines what is to be done to understand those objectives.

The research design is a broad structure that describes that how the entire research project is carried out in the research . In this proposed study we will be using the below methods:-

- Exploratory research design,
- Descriptive research design,

Use of particular research design depends upon type of problem under study. Universe for this study will be total no of pharmaceutical sales executive, doctors, dealers in Rajasthan.

Primary Data sources: It will be collected with the help of tool- Schedules, to be filled in by the respondents.

For data collection from different respondents I will use Google Form and personal interview as source of primary data in my research study.

Secondary Data sources: It will be collected with the help of Books, Journals, Magazines, Newspapers, Websites of Rajasthan and other published sources.

7. RESEARCH METHODOLOGY

Both qualitative and quantitative tools will be used to analyze the data. Qualitative tools would include interviewing sales executive professionals who made it high and big in their respective fields and also those who gave up their professional lives for some reason or the other. Interviews will also be carried out across all samples i.e. few respondents from all categories will contribute qualitatively towards the research.

Also, expert panels will be formed across the academic institutions from which the responses will be derived. These panels will discuss the concept of DSS as a tool to be used for increasing sales in pharmaceutical industry. The panels would comprise senior academicians holding enough experience and expertise with respect to the topic of study.

Data will be analyzed and evaluated with the help of SPSS. Correlation, reliability test and regression will be used to understand the relation between the factors which will be the independent variable and dependent variable.

8. SAMPLING METHOD

Sampling is the process of learning about population(respondent) on the basis of sample drawn from it. The sample details for this study are as bellow.-

- Sampling Technique: Purposive for company selection and simple random Sampling for data collection
- Sample Frame: Rajasthan
- Sample Size: 150

9. CHAPTERIZATION

Cauterization is a way in which entire research work will run in different chapters.

These chapters are-

CHAPTER 1 :- INTRODUCTION

CHAPTER 2 :- LITERATURE REVIEW

CHAPTER 3 :- METHODOLOGY FRAMEWORK

CHAPTER 4 :- ANALYSIS AND FINDINGS

CHAPTER 5 :- CONCLUSION AND SUGGESTIONS

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